REMARKS

Claims 1-49 are pending in this application. By this Amendment, claims 1, 3, 13, 25, 30 and 36 are amended to correct for various informalities and not to overcome prior art. Reconsideration based on the above amendments and following remarks is respectfully requested.

I. Information Disclosure Statement

The Office Action did not return an initialed copy of the Information Disclosure Statements (IDSs) that were filed on February 15, 2002, May 17, 2002, November 18, 2002, February 6, 2003 and August 7, 2003. The Examiner is requested to consider the references and return initialed PTO-1449 with the next Patent Office communication. For the Examiner's convenience, a copy of the PTO-1449 for each of the above-identified IDS is attached hereto.

II. Claims 1-49 Satisfy the Requirements of 35 U.S.C. §112, First Paragraph

The Office Action rejects claims 1-49 under 35 U.S.C. §112, first paragraph, for failing to comply with the written description requirement. Specifically, the Office Action asserts that there is no support in the written description for the term "different" in the claim recitation "the underlying layer constituting a different layer relative to the first luminescent layer" set forth in independent claims 1, 13, 25, 30 and 36.

Claims 1, 13, 25, 30 and 36 have been amended to eliminate the rejected claim language. Thus, the rejection is moot. Withdrawal of the rejection of claims 1-49 under 35 U.S.C. §112, first paragraph, is respectfully requested.

III. Claims 1-49 Satisfy the Requirements of 35 U.S.C. §112, Second Paragraph

The Office Action rejects claims 1-49 under 35 U.S.C. §112, second paragraph, as being indefinite. Specifically, the Office Action asserts that the claim recitation "different layer" is not clear.

Claims 1, 13, 25, 30 and 36 have been amended to eliminate the rejected claim language. Thus, the rejection is moot. Withdrawal of the rejection of claims 1-49 under 35 U.S.C. §112, second paragraph, is respectfully requested.

IV. All Pending Claims Are Patentable

The Office Action rejects claims 13-15, 17-24 and 36-40 under 35 U.S.C. §103(a) over U.S. Patent No. 5,895,692 to Shirasaki et al. (hereinafter "Shirasaki"); and claim 16 under 35 U.S.C. §103(a) over Shirasaki in view of U.S. Patent No. 5,317,169 to Nakano et al. (hereinafter "Nakano"). The rejections are respectfully traversed.

Shirasaki does not teach or suggest the feature "the luminescent material composition serving as luminescence function and carrier transfer function in the formed at least one luminescent layer" recited in independent claim 13, and similarly recited in independent claim 36.

The Office Action, at page 6, in withdrawing its previously asserted rejection of claims 1-12, 25-35 and 41-49 under §103(a) over Shirasaki, admits that none of the prior art, including Shirasaki, discloses a luminescent material composition serving as luminescence function and carrier transfer function. This feature is found in independent claims 1, 25 and 30, as well as in independent claims 13 and 36.

Thus, Applicants respectfully submit that independent claims 13 and 36 are patentable over the applied art. Claims 14-24 and 37-40, which depend from claims 13 and 36, respectively, also are patentable over the applied art for at least the reasons discussed above. Withdrawal of the rejection of claims 13-15, 17-24 and 36-40 under 35 U.S.C. §103(a) is respectfully requested.

V. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-49 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

James A. Oliff
Registration No. 27,075

George P. Simion
Registration No. 47,089

JAO:GPS/al

Attachments:
Copies of PTO-1449 filed with Information Disclosure Statements on February 15, 2002, May 17, 2002, November 18, 2002, February 6, 2003 and August 7, 2003.

Date: November 20, 2003

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

DEPOSIT ACCOUNT USE AUTHORIZATION
Please grant any extension necessary for entry;
Charge any fee due to our Deposit Account No. 15-0461

Form PTO-1449 (REV. 8-83)	US Dept. of Commerce PATENT & TRADEMARK OFFICE	ATTY DOCKET NO. 101050	APPLICATION NO. 09/101,083
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		APPLICANT(S) Satoru MIYASHITA et al.	
		FILING DATE July 8, 1998	GROUP 1773

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS
		5,041,190	08/1991	DRAKE et al.	156	647
		5,713,278	02/1998	KAWANO et al.	101	128.4
		5,742,129	04/1998	NAGAYAMA et al.	315	167
		5,771,562	06/1998	HARVEY, III et al.	29	592.1
		5,935,331	08/1999	NAKA et al.	118	319
		5,997,122	12/1999	MORIYAMA et al.	347	11
		6,195,142 B1	02/2001	GYOTOKU et al.	349	69
		6,187,457 B1	02/2001	ARAI et al.	428	690

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
		JP-A-7-235378 (w/ English Language Abstract and Translation)	5/1995	Japan		

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

		"Electroluminescence in Conjugated Polymers;" R. H. Friend, R. W. Gymer, A. B. Holmes, J. H. Burroughes, R. N. Marks, C. Taliani, D. D. C. Bradley, D. A. Dos Santos, J. L. Bredas, M. Logdlund & W. R. Salaneck; Nature, Vol. 397, 14 January 1999.
		Opto-Electronic Properties of Disordered Organic Semiconductors, Proefschrift, Michel Cornelis Josephus Marie Vissnberg, geboren te Sint Maarten in 1972.
		Fabrication of Organic Light-Emitting Devices, Jennifer Reinig, Junior Physics/Math Major at Drake University, Physics REU: IA State University, Summer 2001
		The electroluminescence of organic materials; Ullrich Mitschke and Peter Bauerle, Received 2nd November 1999, Accepted 15th February 2000, Published on the Web 6th June 2000.

EXAMINER	DATE CONSIDERED

Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Date: August 7, 2003

Form PTO-1449 (REV. 8-83)	US Dept. of Commerce PATENT & TRADEMARK OFFICE	ATTY DOCKET NO. 101050	APPLICATION NO. 09/101,083
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		APPLICANTS Satoru MIYASHITA et al.	
		FILING DATE July 8, 1998	GROUP 1773

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
		JP 072235378	9/1995	Japan		

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

EXAMINER	DATE CONSIDERED

Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Date: February 6, 2003

Form PTO-1449 (REV. 8-83)	US Dept. of Commerce PATENT & TRADEMARK OFFICE	ATTY DOCKET NO. 101050	APPLICATION NO. 09/101,083
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		APPLICANT(S): Satoru MIYASHITA et al.	
		FILING DATE: July 8, 1998	GROUP: 1773

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS
		5,665,857	09/09/97	SHI	528	373
		5,540,999	07/30/96	YAMAMOTO et al.	428	411.1
		5,821,002	10/13/98	OHNISHI et al.	428	690
		6,008,828	12/28/99	FURUKI et al.	347	139
		5,281,489	01/25/94	MORI et al.	428	690
		4,569,305	02/11/86	FERRI et al.		
		4,687,352	08/18/87	IGI et al.		
		4,792,817	12/20/88	BARNEY		
		5,534,716	07/09/96	TAKEMURA		
		5,645,901	07/08/97	FUKUCHI et al.		
		5,728,626	03/17/98	ALLMAN et al.		
		5,744,171	04/28/98	SCHNEIDER		
		5,757,453	05/26/98	SHIN et al.		
		5,759,268	06/02/98	BEGIN et al.		
		5,770,260	06/23/98	FUKUYAMA et al.		
		5,779,799	07/14/98	DAVIS		
		5,784,132	07/21/98	HASHIMOTO		
		5,989,945	11/23/99	YUDASAKA et al.	438	149
		5,656,826	08/12/97	MISAWA et al.	257	72
		5,274,481	12/28/93	KIM		
		5,399,390	03/21/95	AKINS		
		3,792,308	02/12/74	OTA		
		4,891,110	01/02/90	LIBMAN et al.		
		4,007,462	02/08/77	WETSEL, Jr.	427	157
		6,180,294 B1	01/30/01	SHIBA et al.	349	106
		09/901,095	07/10/01	KIMURA et al.		
		09/901,096	07/10/01	KIGUCHI et al.		
		09/901,126	07/10/01	YUDASAKA et al.		

EXAMINER	DATE CONSIDERED

Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Date: November 18, 2002

Form PTO-1449 (REV. 8-83)	US Dept. of Commerce PATENT & TRADEMARK OFFICE	ATTY DOCKET NO. 101050	APPLICATION NO. 09/101,083
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		APPLICANT(S): Satoru MIYASHITA et al.	
		FILING DATE: July 8, 1998	GROUP: 1773

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
		JP-A-3-102324	04/26/91	Japan		
		JP-A-3-126921	05/30/91	Japan		
		JP-A-4-253033	09/08/92	Japan		
		JP-A-5-105486	04/27/93	Japan		
		JP-A-5-116941	05/14/93	Japan		
		JP-A-6-204168	07/22/94	Japan		
		JP-A-62-223727	10/01/87	Japan		
		JP-A-6-281958	10/07/94	Japan		
		JP-A-61-78165	04/21/86	Japan		
		JP-A-7-122475	05/12/95	Japan		
		JP-A-8-1065	01/09/96	Japan		
		JP-A-8-32085	02/02/96	Japan		
		JP-A-5-283166	10/29/93	Japan		
		JP-A-6-308312 (w/English abstract)	11/04/94	Japan		
		JP-A-1-140188	06/01/89	Japan		
		JP-A-3-192334 (w/English abstract)	08/22/91	Japan		
		JP-A-6-281917 (w/English abstract)	10/07/94	Japan		
		JP-A-7-134288 (w/English abstract)	05/23/95	Japan		
		JP-A-3-33824 (w/English abstract)	02/14/91	Japan		
		JP-A-10-12377 (w/English translation)	01/16/98	Japan		
		0 431 249 A2	06/12/91	Europe		
		EP 0 732 868 A1	09/18/96	Europe		
		EP 0 717 439 A2	06/19/96	Europe		
		EP 0 756 932 A2	02/05/97	Europe		
		DE 196 03 451 A1	08/01/96	Germany		
		WO 90/13148	11/01/90	WIPO		
		WO 95/01871	01/19/95	WIPO		
		WO 98/32783	07/30/98	WIPO		

EXAMINER	DATE CONSIDERED

Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Date: November 18, 2002

Form PTO-1449 (REV. 8-83)	US Dept. of Commerce PATENT & TRADEMARK OFFICE	ATTY DOCKET NO. 101050	APPLICATION NO. 09/101,083
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		APPLICANT(S): Satoru MIYASHITA et al.	
		FILING DATE: July 8, 1998	GROUP: 1773

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)		
		UCHIDA, Masao et al., "Color-Variable Light-Emitting Diode Utilizing Conducting Polymer Containing Fluorescent Dye",
		Jpn. J. Appl. Phys., Part 2 (1993), 32 (7A), L921-L924 (Chemical Abstract, Vol. 119, No. 16).

EXAMINER	DATE CONSIDERED
Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Date: November 18, 2002

Form PTO-1449 (REV. 8-83) US Dept. of Commerce PATENT & TRADEMARK OFFICE	ATTY DOCKET NO. 101050	APPLICATION NO. 09/101,083
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	APPLICANT(S): Satoru MIYASHITA et al.	
	FILING DATE: July 8, 1998	GROUP: 1773

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS
		5,972,419	10/26/99	ROITMAN		
		6,137,221	10/24/00	ROITMAN et al.		
		2002/0011783 A1	01/31/02	HOSOKAWA		
		5,652,067	07/29/97	ITO et al.		
		5,472,889	12/05/95	KIM et al.		
		5,439,519	08/08/95	SAGO et al.		
		6,180,294 B1	01/30/01	SHIBA et al.		

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
		0 656 644 A1	06/07/95	Europe		
		0 218 117 A2	04/15/87	Europe		
		DE 42 12 501 C1 (w/English abstract)	08/05/93	Germany		
		0 589 049 A1	03/30/94	Europe		
		0 404 545 A2	12/27/90	Europe		
		JP-A-62-295028 (w/English abstract)	12/22/87	Japan		
		JP-A-6-308312 (w/English abstract)	11/04/94	Japan		

EXAMINER	DATE CONSIDERED

Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Date: November 18, 2002

Form PTO-1449 (REV. 8-83)	US Dept. of Commerce PATENT & TRADEMARK OFFICE	ATTY DOCKET NO. 101050	APPLICATION NO. 09/101,083
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		APPLICANT(S) Satoru MIYASHITA et al.	
		FILING DATE July 8, 1998	GROUP 1773

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
		0 550 063 A2	07/07/93	Europe		
		JP-A-10-12377 (w/English abstract)	01/16/98	Japan		

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

EXAMINER	DATE CONSIDERED

Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Date: May 17, 2002

Form PTO-1449 (REV. 8-83)	US Dept. of Commerce PATENT & TRADEMARK OFFICE	ATTY DOCKET NO. 101050	APPLICATION NO. 09/101,083
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		APPLICANT(S) Satoru MIYASHITA et al.	
		FILING DATE July 8, 1998	GROUP 1773

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS
		5,132,248	07/21/92	DRUMMOND et al.		
		5,214,350	05/25/93	REMEC et al.		
		5,276,380	01/04/94	TANG		
		5,326,692	07/05/94	BRINKLEY et al.		
		5,593,788	01/14/97	SHI et al.		
		5,610,932	03/11/97	KESSLER et al.		
		5,854,139	12/29/98	ARATANI et al.		

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
		JP-A-62-31174 (w/English abstract)	02/10/87	Japan		
		JP-A-62-85224 (w/English abstract)	04/18/87	Japan		

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

		LEWIS, Richard J., *Hawley's Condensed Chemical Dictionary*, Thirteenth Edition, 1997, pp. 820 & 900-901.
		MORRISON, Robert et al., *Organic Chemistry*, Fifth Edition, 1987, p. 637.
		BUDAVARI, Susan et al., *The Merck Index An Encyclopedia of Chemicals, Drugs, and Biologicals*, Twelfth Edition, 1996, p. 357.
		ADACHI, Chihaya et al., "Blue light-emitting organic electroluminescent devices", *Appl. Phys. Lett.*, Vol. 56, No. 9, February 26, 1990, pp. 799-801.
		BURROWS, P.E. et al., "Color-tunable organic light-emitting devices", *Appl. Phys. Lett.*, Vol. 69, No. 20, November 11, 1996, pp. 2959-2961.
		KIDO, J. et al., "Single-layer white light-emitting organic electroluminescent devices based on dye-dispersed poly(*N*-vinylcarbazole)", *Appl. Phys. Lett.*, Vol. 67, No. 16, October 16, 1995, pp. 2281-2283.
		WU, C.C. et al., "Integrated three-color organic light-emitting devices", *Appl. Phys. Lett.*, Vol. 69, No. 21, November 18, 1996, pp. 3117-3119.
		ZHANG, C. et al., "Blue emission from polymer light-emitting diodes using non-conjugated polymer blends with air-stable electrodes", *Synthetic Metals*, Vol. 72, 1995, pp. 185-188.
		ISHIMARU, N. et al., "Development of Color Filters by Pigment Ink Jet Printing (II) (-Production Technology-), *SID*, 1997, pp. 69-72.

EXAMINER	DATE CONSIDERED

Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449 (REV. 8-83)	US Dept. of Commerce PATENT & TRADEMARK OFFICE	ATTY DOCKET NO. 101050	APPLICATION NO. 09/101,083
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		APPLICANT(S) Satoru MIYASHITA et al.	
		FILING DATE July 8, 1998	GROUP 1773

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

		EBISAWA, F. et al., "Electrical Properties of polyacetylene/polysiloxane interface", *J. Appl. Phys.*, Vol. 54, No. 6, June 1983, pp. 3255-3259.
		KIDO, Junji et al., "Organic electroluminescent devices based on molecularly doped polymers", *Appl. Phys. Lett.*, Vol. 61, No. 7, August 17, 1992, pp. 761-763.
		VAN SLYKE, S.A. et al., "Organic electroluminescent devices with improved stability", *Appl. Phys. Lett.*, Vol. 69, No. 15, October 7, 1996, pp. 2160-2162.
		ZHANG, C. et al., "Blue electroluminscent diodes utilizing blends of poly(*p*-phenylphenylene vinylene) in poly(9-vinylcarbazole)", *Synthetic Metals*, Vol. 62, 1994, pp. 35-40.
		VESTWEBER, H. et al., "Electroluminescence from polymer blends and molecularly doped polymers", *Synthetic Metals*, Vol. 64, 1994, pp. 141-145.
		NONAKA, Y. et al., "Development of Color Filters by Pigment Ink Jet Printing (I) (Fundamental Technology)", *SID*, 1997, pp. 238-241.
		WU, Chung-Chih et al., "Efficient Organic Electroluminescent Devices Using Single-Layer Doped Polymer Thin Films with Bipolar Carrier Transport Abilities", *IEEE Transactions on Electron Devices*, Vol. 44, No. 8, August 1997, pp. 1269-1281.
		WU, C.C. et al., "Surface modification of indium tin oxide by plasma treatment: An effective method to improve the efficiency, brightness, and reliability of organic light emitting devices", *Appl. Phys. Lett.*, Vol. 70, No. 11, March 17, 1997, pp. 1348-1350.
		TIAN, Jing et al., "Luminescent Properties of Conjugated Poly(*p*-pyridylvinylene) and Poly(*p*-pyridiniumvinylene)", *Polymer Preprints*, Vol. 35, No. 2, August 1994, pp. 761-762.
		MARSELLS, Michael J. et al. "Regiochemical Consequences in Poly(2,5-Pyridinium Vinylene): Kekule' and Non-Kekule' Conductive Polymers", *Polymer Preprints*, Vol. 33, No. 1, April 1992, pp. 1196-1197.
		HOSOKAWA, Chishio et al., "Highly efficient blue electroluminescence from a distyrylarylene emitting layer with a new dopant", *Appl. Phys. Lett.*, Vol. 67, No. 26, December 25, 1995, pp. 3853-3855.
		HEBNER, T.R. et al. "Ink-jet printing of doped polymers for organic light emitting devices", *Appl. Phys. Lett.*, Vol. 72, No. 5, February 2, 1998, pp. 519-521.
		MAYO, Jonathan W. et al., "16.3: Colour Filters for Flat Panel Displays by High Definition Ink Jet Printing", *Euro Display '96*, October 1-3, 1996, pp. 537-540.
		PARKER, I.D. et al., "Efficient blue electroluminescence from a fluorinated polyquinoline", *Appl. Phys. Lett.*, Vol. 65, No. 10, September 5, 1994, pp. 1272-1274.
		TIAN, Jing et al., "Photophysical Properties, Self-Assembled Thin Films, and Light-Emitting Diodes of Poly(*p*-pyridylvinylene)s and Poly(*p*-pyridinium vinylene)s", *Chem. Mater.*, Vol. 7, No. 11, 1995, pp. 2190-2198.
		TIAN, Jing et al., "Electroluminescent Properties of Self-Assembled Polymer Thin Films", *Adv. Mater.*, Vol. 7, No. 4, 1995, pp. 395-398.
		JOHNSON, G.E. et al., "Electroluminescence from single layer molecularly doped polymer films", *Pure & Appl. Chem.*, Vol. 67, No. 1, 1995, pp. 175-182.

EXAMINER	DATE CONSIDERED

Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.